

Descriptions of *Filenchus japonicus* n. sp. and
Ottolenchus helenae (SZCZYGIEL, 1969) BRZESKI, 1982 from
 Japan (Tylenchida: Tylenchidae)

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Filenchus japonicus n. sp. collected from rhizosphere of *Scirpus wichurii* forma *concolor* in Mt. Aso, Kumamoto has two incisures of lateral field, large spear knobs, functional spermatheca, and tail nearly as long as vulva-anus distance. On these bases, *Tylenchus filiformis*: DAS, 1960, nec BÜTSCHLI, 1873 was synonymized with the new species, although it differed from the latter in larger MB value (50 vs. 43), more rounded median oesophageal bulb, shorter body, etc. From *T. filiformis*: THORNE, 1961 nec BÜTSCHLI, 1873, this new species was distinguished by the longer body, tail nearly as long as vulva-anus distance, two incisures of lateral field, and presence of functional spermatheca. It differed from *T. vulgaris* by having large spear knobs, lateral field with two incisures, and wider annule at mid-body (1.5 μ m vs. 1.0 μ m). *Tylenchus vulgaris* and *T. exiguus* were considered distinct species and were transferred to *Filenchus*. *Ottolenchus helenae* from rhizosphere of *Cirsium suffultum* in Mt. Aso, Kumamoto was a new record of the species from Japan and was redescribed. *Jpn. J. Nematol.* **16**: 1-9 (1986).

During survey of the Japanese plant-parasitic nematodes, we found two tylenchid species and determined that they belonged to the genera *Filenchus* (ANDRÁSSY) MEYL of Tylenchinae (*sensu* SIDDIQI, 1986) and *Ottolenchus* HUSAIN & KHAN of Duosulciinae (*sensu* SIDDIQI, 1986). SIDDIQI¹⁰⁾, in his recent monograph of the Tylenchida, has given the genera new diagnoses, new synonyms, lists of species included and historical remarks. Forty-five species have been listed for *Filenchus*, and six for *Ottolenchus* respectively¹⁰⁾. Further species, *F. spiculatus* SULTAN, 1986¹¹⁾ is available for *Filenchus*.

The follows were stressed by SIDDIQI¹⁰⁾ as generic diagnosis of *Filenchus*: (1) amphidial apertures straight longitudinal slits; (2) tails generally filiform and straight, ... not ventrally curved or hooked. For *Ottolenchus*, he stressed following generic characterstates: (1) amphids with longitudinal curved slits; (2) cephalic region low, less than three adjacent body annules high, circular in cross-section; (3) postvulval uterine sac present.

The specimens examined were killed by gentle heat, fixed by TAF, and mounted in the glycerine after slow dehydration.

***FILENCHUS JAPONICUS* N. SP.**

(Fig. 1 A-J)

Syn. *Tylenchus filiformis* BÜTSCHLI: DAS, 1960, nec BÜTSCHLI, 1873.

Measurements: Holotype ♀: L=819 μ m; a=41; b=7.1; c=4.5; c'=13.7; V=61; spear=12.0 μ m; MB (distance from anterior end of body to center of median oesophageal bulb as percentage of the oesophageal length)=41; MBB (distance from anterior end of body to base of median oesophageal bulb as percentage of the oesophageal length)=45; Tail/V-A (tail length divided by vulva-anus distance)=1.36; Rex (annules from anterior body end to excretory pore)=64; ROes (annules from anterior body end to base of oesophagus)=75; RVan (annules between vulva and anus)=92.

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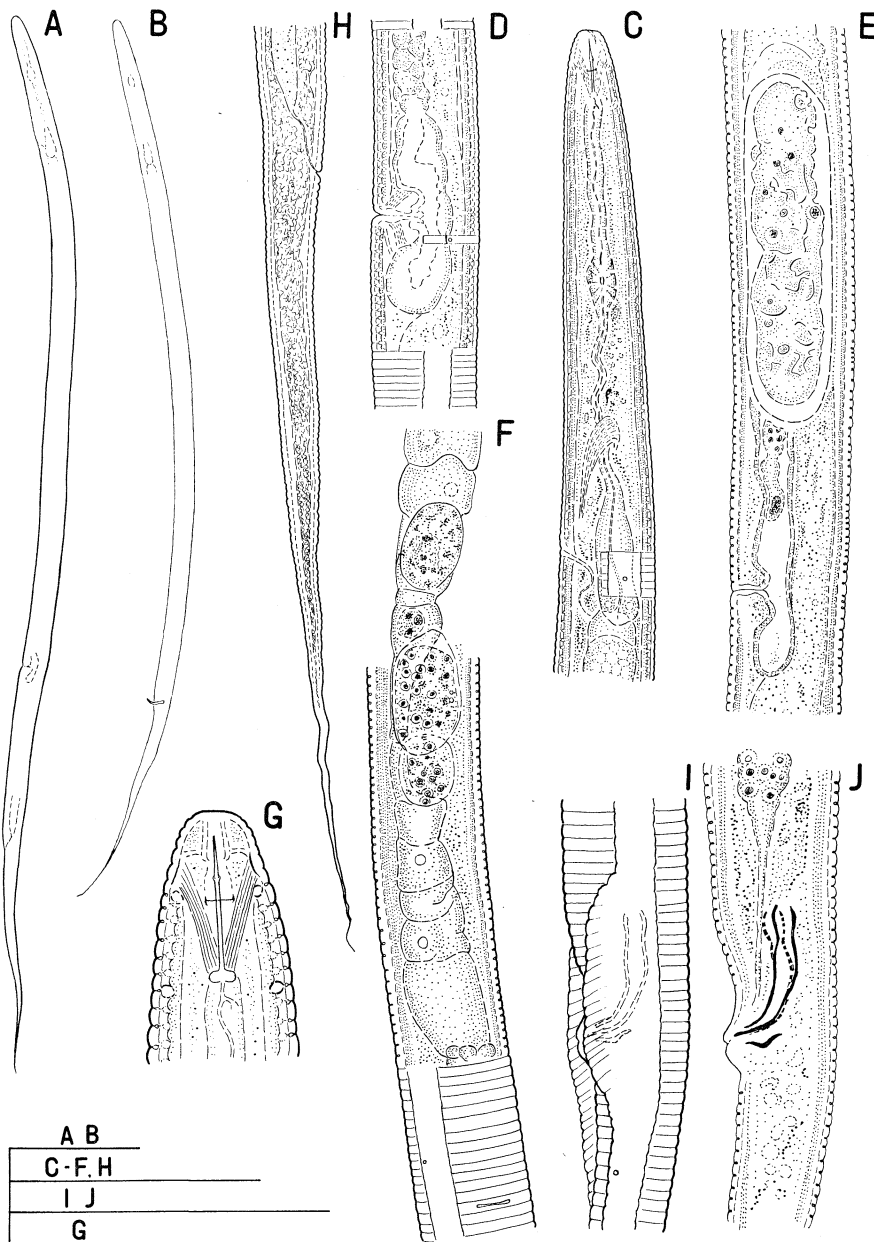


Fig.1. *Filenchus japonicus* n. sp. Female: A, general view; C, oesophageal region, inner view; D, vulval region, lateral view; E, *do.*, same view showing egg; F, *do.*, subventral view showing spermatheca; G, anterior body end; H, tail. Male: B, general view; I, cloacal region, surface view; J, *do.*, inner view. Scale: A, B=100 μ m; C-F, H=50 μ m; I, J=40 μ m; G=30 μ m.

19 ♀♀ (holotype and paratypes): $L=735-907$ (845 ± 39 : mean \pm standard deviation) μm ; $a=36-45$ (39 ± 2); $b=6.4-7.9$ (7.3 ± 0.4), $c=4.2-5.4$ (4.7 ± 0.2); $c'=9.9-16.0$ (12.9 ± 1.4); $V=59-63$ (60 ± 1); $\text{spear}=10.5-12.5$ (11.6 ± 0.6) μm ; $\text{MB}=40-45$ (42 ± 1); $\text{MBB}=45-51$ (47 ± 1); $\text{Tail/V-A}=1.00-1.36$ (1.17 ± 0.08); $\text{Rex}=64-77$ (71 ± 4); $\text{ROes}=75-98$ (82 ± 7); annules between base of oesophagus and vulva= $254-299$ (273 ± 12); $\text{RVan}=92-115$ (102 ± 7); annules from anterior body end to anus= $438-489$ (457 ± 14); MBd (distance from anterior end of body to center of median oesophageal bulb)= $47-56$ (50 ± 2) μm ; median oesophageal bulb width= $5.5-7.0$ (6.3 ± 0.4) μm ; median oesophageal bulb length= $12-16$ (13 ± 1) μm ; isthmus length= $30-48$ (34 ± 4) μm ; basal oesophageal bulb length= $24-30$ (27 ± 2) μm ; Exp. d. (distance from anterior body end to excretory pore)= $87-105$ (100 ± 4) μm ; oesophagus= $111-132$ (118 ± 5) μm ; gonad= $176-367$ (282 ± 51) μm ; V-A (distance between vulva and anus)= $132-176$ (154 ± 12) μm ; tail= $157-196$ (181 ± 12) μm ; head width at base= $6.5-7.5$ (7.0) μm ; head height= $3-4$ (3.5) μm ; spear knobs width= $2.0-2.5$ (2.3) μm ; lateral fields width at mid-body= $5.5-8.0$ (6.6 ± 0.8) μm ; vagina= $8.0-11.0$ (9.5 ± 0.8) μm ; rectum= $9.0-14.0$ (11.8 ± 1.6) μm ; post uterine sac= $13.5-21.5$ (17.1 ± 1.8) μm .

18 ♂♂ (paratypes): $L=686-855$ (754 ± 43) μm ; $a=35-47$ (42 ± 3); $b=5.6-7.4$ (6.7 ± 0.4); $c=4.1-5.1$ (4.4 ± 0.2); $c'=10.9-20.9$ (14.4 ± 2.1); $T=53.6-77.8$ (61.0 ± 7.9); $\text{spear}=11.0-12.5$ (11.5 ± 0.6) μm ; $\text{MB}=40-44$ (43 ± 1); $\text{Rex}=66-74$ (71 ± 2); $\text{ROes}=76-98$ (85 ± 5); $\text{MBd}=46-51$ (48 ± 1) μm ; median bulb length= $10-12$ (11) μm ; isthmus length= $30-44$ (34 ± 3) μm ; basal bulb length= $16-30$ (25 ± 3) μm ; Exp. d.= $86-97$ (92 ± 3) μm ; oesophagus= $107-122$ (113 ± 4) μm ; testis= $291-459$ (353 ± 50) μm ; tail= $144-198$ (171 ± 15) μm ; head width at base= 5.0 ± 6.5 (5.8 ± 0.5) μm ; lateral field width at mid-body= $4.0-6.5$ (5.0 ± 0.6) μm ; annule width at mid-body= $1.2-1.5$ (1.3 ± 0.1) μm ; bursa= $32-45$ (38 ± 4) μm ; spicule= $16.0-18.0$ (16.6 ± 0.7) μm ; gubernaculum= $3.0-4.5$ (4.1 ± 0.3) μm .

Description: Female: Body straight to slightly arcuate when relaxed by gentle heat. Cuticle thin shallowly annulated, annules moderately broad, 1.3 to 1.7 (1.5 ± 0.1) μm apart in mid-body. Lateral field with two incisures, originate 23 to 35 annules behind spear knobs or from about the level of median oesophageal bulb, very weakly crenate on margins, 25 to 36% (31 ± 3) of body diameter at mid-body.

Head slightly truncate and not offset from neck in lateral view, with four annules, cephalic sclerotization weak. Body at base of oesophagus 2.7 to 3.4 (3.0 ± 0.2) times head base. Spear slender; 1.5 to 1.9 (1.7 ± 0.1) times head width; conus decidedly shorter than shaft, 31 to 42% (36 ± 3) of entire spear length; basal knobs small, rounded, never inclining posteriorly, 18 to 23% (21 ± 2) of corresponding body diameter, located at the seventh to ninth body annule; protractor of spear inserted on anterior wall of neck. Orifice of dorsal oesophageal gland close to spear knobs, 1.5 to 2.5 μm apart. Anterior and posterior cephalids located at the third and the ninth body annule respectively (Fig. 1, G). Procorpus much longer than spear, 2.3 to 3.5 (2.7 ± 0.3) times spear length; median oesophageal bulb narrow, ovate or spindle-shaped, 33 to 44% (40 ± 3) of corresponding body diameter, valvular apparatus in center discernible; isthmus longer than basal oesophageal bulb, 1.1 to 1.7 (1.3 ± 0.2) times of the latter; basal bulb narrow, cylindrical, evenly tapered to isthmus and the anterior margin not easily demarcated from isthmus, basal margin rounded, with broad cardia at base. Excretory pore located at 72.7 to 91.2% (84.3 ± 4.5) of oesophagus length and 10.6 to 13.0% (11.8 ± 0.5) of body length. Deirid behind excretory pore, located at same level to 6 (3 ± 1) annules posterior to the latter. Hemizonid 2 to 2.5 annule long, lying just anterior or one annule anterior to excretory pore.

Vulva transverse slit, aberrant (right subventral), not depressed and without distinct lateral flaps. Vagina slightly swollen medially or almost tubular and slightly sinuate due to aberrant condition, at right angle to body axis, 36 to 55% (45 ± 6) body diameter long.

Postuterine sac 70 to 100% (81 ± 7) of corresponding body diameter. Gonad 46 to 93% (73 ± 11) of distance between posterior end of oesophagus and vulva. Spermatheca offset, often showing two lobes; anterior elongate oval 14 to 29 (21 ± 4) μm long, 7 to 18 (14 ± 3) μm across; posterior rounded 7 to 20 (13 ± 4) μm long, 8 to 15 (11 ± 3) μm across; each packed with minute globular spermatozoa 2.0 to 2.5 μm in diameter. Egg (observed in single specimen) 68 μm long, four times as long as wide. Phasmid dorso-sublateral in position, one to four annules posterior to vulva (exceptionally one annule anterior to vulva). Rectum slightly shorter than anal body diameter, *i. e.* 0.7 to 0.9 (0.8) times of the latter. Tail short for the genus, about as long as or slightly longer than vulva-anus distance; terminus needle-like, rarely hair-like.

Male: Comparing with female, description is given below: Body almost straight, rather shorter in length. Annule slightly narrower. Lateral field as wide as in female, 27 to 33% (30 ± 2) of body diameter. Head narrower in width. Spear as long as in female, though longer in comparison with head width, 1.7 to 2.3 (2.0 ± 0.2) times head base diameter. Body at base of oesophagus 2.5 to 3.5 (3.1 ± 0.3) times as wide as head base. Oesophagus shorter; isthmus 1.2 to 1.6 (1.3) times basal bulb long. Excretory pore position as in female, 73 to 87% (81 ± 3) of oesophagus length and 11.3 to 13.0% (12.3 ± 0.5) of body length. Bursal alae very narrow, crenate on margins, 18 to 25% (22 ± 2) of tail length. Spicules arcuate, cephalated. Gubernaculum trough-shaped.

Diagnosis and relationship: *Filenchus japonicus* n. sp. is briefly characterized by the large body size (735-907 μm long), short spear (10-13 μm long), rounded and moderately large spear knobs lying on the seventh to ninth body annule, presence of anterior and posterior cephalids, coarse annulation of being about 1.5 μm wide, lateral field with only two incisures, two-lobed spermatheca in female, aberrant vulva, and tail nearly as long as vulva-anus distance.

We can list several forms or species around *Filenchus filiformis*. BRZESKI²⁾ recognized four different forms in *Filenchus filiformis* (= *Tylenchus filiformis*) described by

Table 1. Comparison of major characteristics in different forms of *Filenchus filiformis* and related species.

forms	L (μm)	spl (μm)	knb	kba	MB	va	c	T/V-A	lfi	lfw (%)	anw (μm)
<i>filiformis</i> BÜTSCHLI in:											
BÜTSCHLI, 1873	470	?	l	?	35	ob	3.5	2	?	?	?
DE MAN, 1880	ca. 1000	?	s	16	45	ra	6-7.5	1	?	14	fine
ANDRÁSSY, 1954	542-652	10-11	s	11	51	ra	4.5-4.9	1	4	20-25	0.9-1.2
DAS, 1960	690	14	l	6	50	ra	4.9	1	2	20	1.4
THORNE, 1961	500	12-14	l	7	43	ob	3.5	2	4	?	1.5
<i>vulgaris</i>											
BRZESKI, 1963	520-870	10-12	s	8	43	ra	4.2-5.7	1	4	20-28	0.8-1.2
<i>exiguus</i> DE MAN in:											
THORNE, 1961	500-650	12-14	l	11	39	ra	3.8-4.5	1	4	?	fine
<i>japonicus</i> n. sp.	735-907	11-13	l	8	42	ra	4.2-5.4	1	2	25-36	1.2-1.7

Abbreviations used: *spl*=spear length; *knb*=size of spear knob (*l* for large; *s* for small); *kba*=position of spear knobs in body annule; *va*=angle of vagina to body axis (*ob* for oblique; *ra* for at right angle to body axis); *lfi*=incisures of lateral field; *lfw*=width of lateral field; *anw*=annule width.

the various authors^{1, 4, 5, 13)}. Namely, 1) *Tylenchus filiformis* BÜTSCHLI, 1873, 2) *Tylenchus filiformis* BÜTSCHLI: ANDRÁSSY, 1954 *nec* BÜTSCHLI, 1873, 3) *Tylenchus filiformis* BÜTSCHLI: DAS, 1960, *nec* BÜTSCHLI, 1873, 4) *Tylenchus filiformis* BÜTSCHLI: THORNE, 1961, *nec* BÜTSCHLI, 1873. BRZESKI²⁾ considered the form of THORNE as being identical with BÜTSCHLI's species. He excluded the form of ANDRÁSSY from *F. filiformis* complex, regarding it as synonym of his *Filenchus vulgaris* (BRZESKI, 1963) comb. n. (= *Tylenchus vulgaris* BRZESKI, 1963). *Tylenchus filiformis* BÜTSCHLI: DE MAN, 1880 *nec* BÜTSCHLI, 1873 also is a different form. *Filenchus exiguus* (DE MAN, 1876⁷⁾) comb. n. (= *Tylenchus exiguus* DE MAN, 1876), which had been considered to be synonym of *T. filiformis* by some authors^{1, 6, 8, 9)} and was regarded as *species inquirenda* by SIDDIQI¹⁰⁾ is dealt as distinctive form according to BRZESKI²⁾ and THORNE¹³⁾ who redescribed it as valid species. Major characters of these forms are compared in Table 1.

We consider that the new species most resembles *Tylenchus filiformis* BÜTSCHLI: DAS, 1960, *nec* BÜTSCHLI, 1873 by having two incisures of lateral field; wide body annules being about 1.5 μ m; moderately large spear knobs; functional spermatheca; and tail nearly as long as vulva-anus distance. However, it differs from the latter in smaller MB value (38-44 *vs.* 50); shorter spear (11-13 μ m *vs.* 14 μ m); shape of median oesophageal bulb (spindle-shape *vs.* oval); larger percentage of lateral fields width to body width (25-36% *vs.* 20%); larger body (735-907 μ m *vs.* 690 μ m). Although we could not have examined the specimens of *Tylenchus filiformis* BÜTSCHLI: DAS, 1960, *nec* BÜTSCHLI, 1873, for the present, we place the latter as synonym of the new species in order to simplify the situation. Careful examination may place the specimens of DAS in a valid species.

The new species was distinguished from *T. filiformis*: THORNE, 1961 *nec* BÜTSCHLI, 1873 by the long body, tail nearly as long as vulva-anus distance, two incisures of lateral fields, vagina at right angle to body axis, and filled spermatheca. From *Filenchus vulgaris* (BRZESKI, 1963) comb. n., it also differed by having larger spear knobs, lateral field with two incisures, and wider annule at mid-body (1.5 *vs.* 1.0). Further, the new species differ from *Filenchus exiguus* (DE MAN, 1876) comb. n. by having longer body, lateral field with two incisures.

Type habitat and locality: Soil around the root of semiaquatic bulrush, *Scirpus wichurai* BÖCKLER. forma *concolor* (MAXIM.) T. KOYAMA in Mt. Aso, Kumamoto, western Japan.

Type material: Collected on September 2, 1980 by N. MINAGAWA. Holotype ♀ (slide no. T-24) and paratypes ♀♂ are deposited at the "Herbarium and Insect Museum" of National Institute of Agro-Environmental Sciences (NIAES), Yatabe, Tsukuba, Ibaraki, Japan.

Remarks on new combinations: 1) *Filenchus vulgaris* (BRZESKI, 1963) comb. n. (= *Tylenchus vulgaris* BRZESKI, 1963; = *Filenchus filiformis* apud SIDDIQI, 1986 (*nec* BÜTSCHLI, 1873)). 2) *Filenchus exiguus* (DE MAN, 1876) comb. n. (= *Tylenchus exiguus* DE MAN, 1876): According to the redescription¹³⁾, this species has long filiform tail which are not curved ventrally, hence it is referred to the genus *Filenchus*.

OTTOLENCHUS HELENÆ (SZCZYGIEL, 1969) BRZESKI, 1982

(Fig. 2 A-L)

SZCZYGIEL, 1969¹²⁾: pp. 166-168, Fig. 4 A-D (*Tylenchus helenæ*); sandy soil around strawberry root; Ryczywół, distr. Kozienice, Poland. 8♀♀: L=0.43-0.48mm; a=37-46; b=4.6-5.4; c=3.4-3.8; c'=15-18; V=55.5-59.5; spear=7.1-7.7 μ m; MBB=43.

BRZESKI, 1982³⁾: p. 74, Fig. 1 A-F (*Ottolenchus helenæ*); paratypes of SZCZYGIEL, six collections from various localities in Poland, and one collection from Thalwil, Switzerland. 21 ♀♀: L=0.43 (0.35-0.49) mm; a=35 (28-45); b=5.0 (4.7-5.3); c=3.7 (3.0-5.3); c'=15 (10-20); Tail/V-A=2.0 (1.6-2.6); V=58 (53-61); V'=80 (78-82); MB=39 (36-43); spear=6-7 μ m. 2♂♂: L=0.35-0.50mm; a=31-42; b=5.5-5.7; c=3.5-4.3; MB=36-45; spear=6

μm ; spicules=12-14 μm ; gubernaculum=3 μm .

Measurements (based on the recent specimens from Mt. Aso, Kumamoto, Japan): 18♀♀: L=356-454 (393 \pm 24) μm ; a=25-36 (32 \pm 3); b=4.9-6.5 (5.5 \pm 0.4); c=3.4-3.9 (3.6 \pm 0.2); c'=10.0-17.8 (14.3 \pm 2.1); V=54-62 (59 \pm 2); spear=6.5-8.0 (7.1 \pm 0.5) μm ; MB=37-42 (40 \pm 1); MBB=43-49 (46 \pm 2); Tail/V-A=1.8-2.4 (2.1 \pm 0.2); Rex=43-51 (47 \pm 2); ROes=51-69 (62 \pm 6); annules between base of oesophagus and vulva=130-172 (144 \pm 10); RVan=43-64 (52 \pm 7); annules from anterior body end to anus=228-299 (260 \pm 18); MBd=25-32 (29 \pm 2) μm ; median oesophageal bulb width=4.6-6.0 (4.5 \pm 0.5) μm ; median oesophageal bulb length=6.5-11.0 (9.4 \pm 1.2) μm ; isthms length=23-32 (26 \pm 3) μm ; basal bulb length=10-15 (13 \pm 1) μm ; Exp. d.=45-59 (53 \pm 3); oesophagus=59-84 (72 \pm 6) μm ; gonad=83-119 (102 \pm 12) μm ; V-A=44-63 (52 \pm 5) μm ; tail=99-119 (109 \pm 7) μm ; head width at base=3.5-4.5 (4.1) μm ; head height=1.5-2.5 (1.8) μm ; spear knobs width=1.5-2.5 (2.0) μm ; lateral field width at mid-body=2.0-5.0 (2.9 \pm 0.9) μm ; vagina=4.5-6.5 (5.5 \pm 0.5) μm ; rectum=9.5-10.5 (9.2 \pm 2.1); post uterine sac=6.0-9.5 (7.1 \pm 1.0) μm .

2♂♂: L=335-392 μm ; a=32-36; b=4.5-5.2; c=3.3-3.4; c'=15.2-16.9; T=51.7-52.2; spear=7.0 μm ; MB=38-41; Rex=44-47; ROes=63-67; MBd=28.5-31.0 μm ; median bulb length=9.5 μm ; isthmus length=28.5 μm ; basal bulb length=11-13 μm ; Exp. d.=50-52 μm ; oesophagus=75 μm ; testis=122-143 μm ; tail=99-118 μm ; head width at base=4.0-5.0 μm ; lateral field width at mid-body=3.2 μm ; annule width at mid-body=1.0 μm ; bursa=24 μm ; spicule=12.5-13.5 μm ; gubernaculum=3.2 μm .

Description: Female: Body straight to slightly arcuate when relaxed by gentle heat. Cuticle thin shallowly annulated, annules narrow, 0.9 to 1.3 (1.1 \pm 0.1) μm apart in mid-body. Lateral field with two incisures, originate 28 to 36 (32 \pm 4) μm behind neck, weakly crenate on margins, 19 to 39% (24 \pm 6) of body diameter at mid-body.

Head slightly truncate and not offset from neck in lateral view, with obscure fine annules, cephalic sclerotization weak. Body at base of oesophagus 2.3 to 3.5 (2.8 \pm 0.3) times head base. Spear slender; 1.5 to 2.0 (1.8 \pm 0.1) times head width; conus shorter than shaft, 38 to 42% of entire spear length; basal knobs moderate sized, 21 to 38% (31 \pm 6) of corresponding body diameter, elongate, inclining posteriorly, located at the fifth to seventh body annule. Orifice of dorsal oesophageal gland close to spear knobs, 0.5 to 1.0 μm apart. Procorpus much longer than spear, 2.1 to 2.8 (2.3 \pm 0.2) times spear length; median oesophageal bulb ovate or rounded, 40 to 57% (48 \pm 4) of corresponding body diameter, valvular apparatus in center discernible; isthmus much longer than basal oesophageal bulb, 1.8 to 2.4 (2.1 \pm 0.2) times of the latter; basal bulb very short, drop-shaped, basal margin rounded, with broad cardia at base. Excretory pore located at 63 to 88% (74 \pm 7) of oesophagus length and 11.2 to 15.3% (13.4 \pm 0.9) of body length. Deirid from two to seven annules posterior to excretory pore. Hemizonid 1.5 to 2 annule long, lying between just anterior and one annule posterior to (in most cases same level of) excretory pore.

Vulva transverse slit, not depressed and without distinct lateral flaps. Vagina slightly swollen medially or tubular, feebly directed anteriorly, 40 to 58% (48 \pm 4) body diameter long. Postuterine sac 44 to 82% (61 \pm 11) of corresponding body diameter. Gonad 57 to 78% (65 \pm 6) of distance between posterior end of oesophagus and vulva. Spermatheca offset, rounded, 8 to 14 (11) μm long, packed with minute globular spermatozoa, about 1 μm in diameter. Phasmid hardly discernible, observed on eight specimens, in that dorso-sublateral in position, 4 to 10 (8) annules anterior to vulva. Rectum longer than anal body diameter, i.e. 1.3 to 1.4 times of the latter. Tail long, about two times vulva-anus distance; terminus hair-like, rarely needle-like.

Male: Comparing with female, description is given below: Body almost straight, somewhat shorter in length. Annule as wide as in female. Lateral fields as wide as in female,

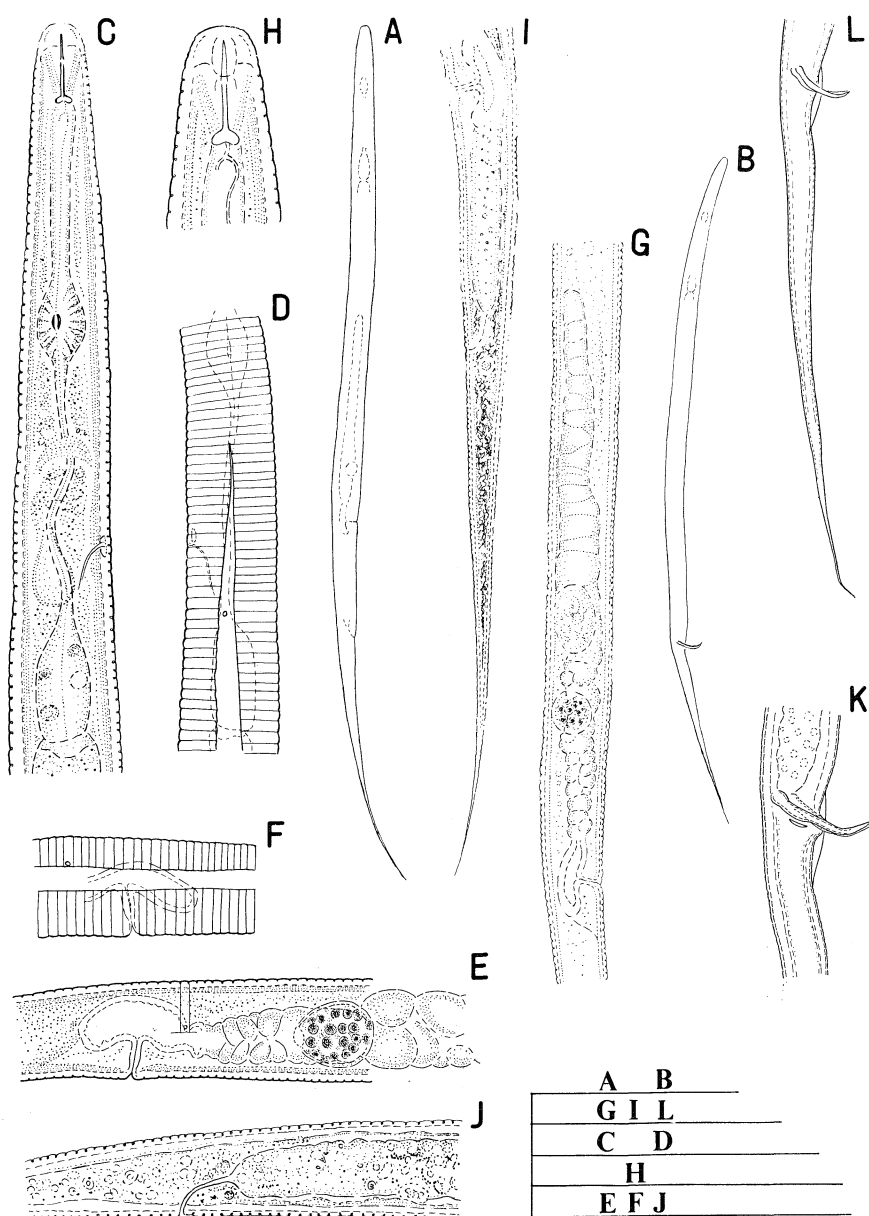


Fig. 2. *Ottolenchus helenae* (SZCZYGIEL, 1969) BRZESKI, 1982 from Mt. Aso, Kumamoto.

Female: A, general view; C, oesophageal region, inner view; D, *do.*, surface view; E, vulval region, inner view showing spermatheca; F, *do.*, surface view; G, *do.*, inner view showing gonad; H, anterior body end; I, tail; J, anal region. Male: B, general view; K, cloacal region, inner view; L, tail. Scale: A, B=100 μ m; G, I, L=50 μ m; C, D=30 μ m; H=20 μ m; E, F, J=40 μ m.

29% of body diameter. Head slightly wider. Spear as long as in female, lying at the sixth body annule, 1.4 to 1.8 times head base diameter. Body at base of oesophagus 2.1 to 2.5 times head base. Oesophagus as long as in female; isthmus 2.2 to 2.6 times basal bulb long. Excretory pore position as in female, 67 to 69% of oesophagus length and 13.3 to 14.9% of body length. Bursal alae very narrow, smooth on margins, 20% of tail length. Spicules slender, elongate, cephalated. Gubernaculum trough-shaped.

Diagnosis and relationship : Population of this species from Japan well cosistents with the original and revised descriptions^{3,12)} of *Ottolenchus helenae* (SZCZYGIEL, 1969) BRZESKI, 1982 based on European populations. The Japanese population, however, has differences comparing with European ones (in parentheses) as: spear knobs lying at the fifth to seventh body annule (figured as lying at the seventh and eighth body annule); short postuterine sac being about 1/2 as long as corresponding body diameter (as long as body diameter); vagina slightly directed anteriorly (at right angle to the body axis); vagina about 1/2 of corresponding body diameter (1/3); tail terminus mostly hair-like and rarely needle-like (in most cases needle-like). The above differences are regarded as infra-specific variations.

Specimens examined : 24 ♀♀, 2 ♂♂, Kusasenri, Mt. Aso, Kumamoto (western Japan), October 19, 1979 (N. MINAGAWA leg.), soil around the root of *Cirsium suffultum* (MAXIM.) MATSUMURA. Specimens are deposited in Laboratory of Nematology and Soil Zoology, NIAES.

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和文摘要

Filenchus japonicus (新種) 及び *Ottolenchus helenae* (SZCZYGIEL) BRZESKIの記載

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熊本県阿蘇山のアブラガヤ根圏土壌から分離された *Filenchus japonicus* (新種) は二本の側線、広い体環、大きな口針節球、陰門—肛門間とほぼ同長の尾部、精子で満たされた受精嚢を持っていた。このことから *Tylenchus filiformis* : DAS, 1960を本種のシノニムにした。本種は *T. filiformis* : THORNE, 1961に比べ、大きな体長、陰門—肛門間とほぼ同長の尾部、雄の存在、二本の側線を持つ点で異なった。*T. vulgaris* とは大きな口針節球、二本の側線、広い体環、を持つことで区別できた。*Tylenchus vulgaris* と *Tylenchus exiguus* を *Filenchus* 属に移した。*Ottolenchus helenae* は日本新記録種で、熊本県阿蘇山のツクシアザミ根圏土壌から分離された。